

Commonwealth of Massachusetts
Executive Office of Health and Human Services



Health Information Technology Council August Meeting

August 5, 2013

3:30-5:00 P.M.

One Ashburton Place, 21st Floor, Boston



Agenda



Today's Agenda:

- 1. Meeting Minutes approval [5 min]**
- 2. Last Mile Program Update [10 min] – Sean Kennedy**
- 3. Mass Hlway Implementation Updates**
 - a) Baystate Healthcare/Pioneer Valley Information Exchange (PVIX) [25 min] – Heather Nelson
 - b) Beth Israel Deaconess Medical Center [10min] – John Halamka
- 4. Advisory Group Discussion & Updates [20 min] – Micky Tripathi**
- 5. Mass Hlway Update**
 - a) Implementation & Support Update [10 min] – Manu Tandon
 - b) Phase 2 Update [5 min] – Manu Tandon
- 6. Wrap up and next steps [5 min] – Manu Tandon**



Discussion Item 1: Last Mile Program Update



Last Mile Program Update



- **Outreach update**
- **Sales Update**
 - Programs' Update
 - Interface Grant Program
 - Implementation Grant Program
- **Last Mile Scorecard**
- **Coming Soon**



Outreach

Sales

Implementation

Support



- Outreach = Demand Creation
 - Collateral development

Collateral	Purpose	URL
HIway Summary	General purpose 2-page brochure	http://www.mehi.masstech.org/sites/mehi/files/images/Hiway/Hiway-Overview-Final.pdf
HIE Use Case Guide	Guide use case ideation & generation	http://www.mehi.masstech.org/health-information-exchange-0/mass-hiway/develop-hiway-use-case
HIway FAQs	To respond to commonly asked questions	http://www.mehi.masstech.org/sites/mehi/files/images/Hiway/Hiway%20FAQs%20July%202013.pdf



Outreach

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- Outreach = Demand Creation
 - Communications

Medium	Purpose	Comments
Mass Hlway Connector	Monthly topical information with a goal of propagating Hlway updates and emerging best practices	Sent to ~ 1,614 July open rate – 22%
Social Media	Broad digital outreach to share daily, weekly activities; grow awareness	Twitter is main source; evaluating Linked In
Health IT Community	Forum for collaboration	HIE group serves our Grantees
Press	Press releases (e.g. Implementation & Interface Grants) and select coverage (e.g. regional grant coverage)	http://mehi.masstech.org/news



Outreach

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Hiway Interface Grants

■ Goals

1. Encourage vendor development of Direct-complaint interfaces, initiated within the workflow of their applications and that will enable use of the Mass Hiway by Massachusetts' providers
2. Accelerate connections to the Mass Hiway
3. Grow transaction volume
4. Support our ultimate goal: to demonstrate measurable improvements in care quality, population health, and cost containment through use of health information technology and the Mass Hiway



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Hiway Interface Grants

- Grant Requirements
 - Interface Standards
 - Adhere to Direct Project Standards for packaging, encrypting and transmitting messages.
 - Use standard documents: C-CDA CCD preferred.
 - Integrated into the workflow of the application
 - Number of Customers in Massachusetts
 - 4 or more current live installations of the product and version on which the interface will be developed.
 - 2 customers willing to join the Mass Hiway and implement
 - Agree to make the interface available to all Massachusetts customers by 1/31/2014 or first release after the grant period ends.



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Hiway Interface Grants

Milestone	Description
1	<ul style="list-style-type: none">• Hiway Grant Agreement signed• Letters of support from 2 customers willing to implement the interface• Updated work plan• Logical architecture diagram
2	<ul style="list-style-type: none">• Use case description (to include details on the data to exchanged), any 3rd party applications or services included in the solution
3	<ul style="list-style-type: none">• Inbound and outbound test transactions exchanged using the Mass Hiway test account
4	<ul style="list-style-type: none">• The interface implemented at 2 or more Massachusetts customers that have joined the Mass Hiway• A test transaction exchanged• Final Report• All required support documentation provided to MeHI



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Support



Hiway Interface Grants

■ Grantee description

- 9 of 12 have signed the grant agreement. We will share the grantees at next HIT-C.

Description	Amount
Ambulatory EHR & Practice Management	\$101,085.00
Ambulatory and Inpatient EHR	\$108,000.00
Ambulatory EHR	\$50,000.00
Imaging	\$59,720.50
Ambulatory EHR	\$150,000.00
Behavioral Health EHR	\$150,000.00
Homecare	\$75,000.00
Homecare & Hospice EHR	\$92,600.00
Practice management	\$150,000.00
Patient engagement	\$150,000.00
Physician practice patient portal	\$51,940.00
Ambulatory EHR	\$150,000.00
Total	\$1,288,345.50

NOTE: GE and NetSmart were awarded Interface Grants under the Tier 1 solicitation; lifeIMAGE has an Implementation Grant



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Hiway Implementation Grants

- Grant Goals
 - Build awareness of the Hiway
 - Catalyze & accelerate connections to the Hiway
 - Build the Hiway's value & cultivate 'stories'



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Hiway Implementation Grants

- Update
 - Grant Agreements signed 31 / 32
 - Grantees achieved M1 4 / 32
 - Organizations signed PA 29 / 75
 - 75 = high number; may be fewer depending on how orgs choose to connect
 - Grants with collaborators in the following sector:
 - Behavioral Health
 - Long-term Care
 - Small Practice
- Grant Program kick-off call attendees 70+
- ‘Grantee-specific’ kick-offs 29/32



Outreach

Sales

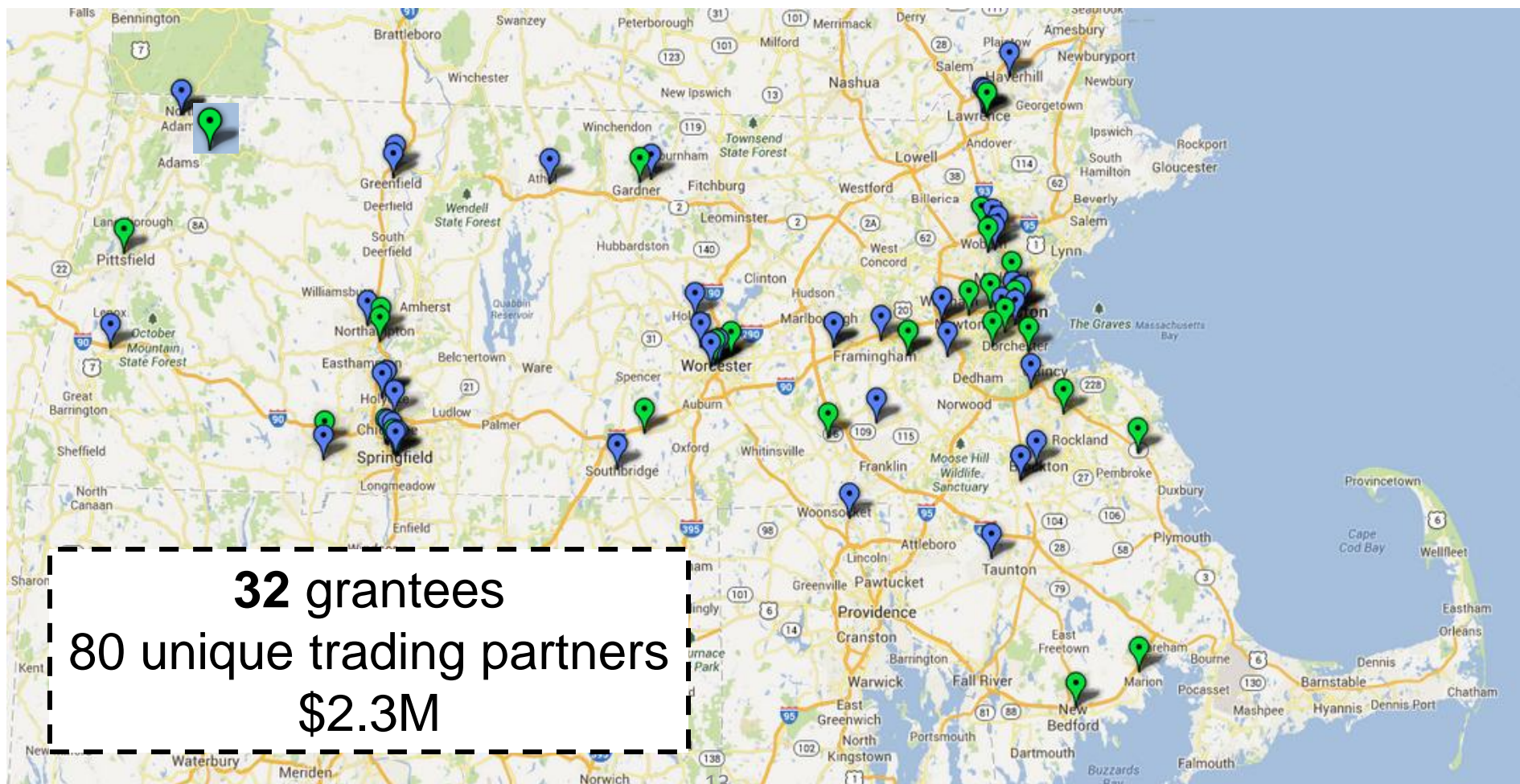
Implementation

Support



Hiway Implementation Grants

■ Grantees & their trading partners by location





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Hiway Implementation Grants

Milestone	Description	Deliverable(s)
1	Hiway Participant Agreement signed by all organizations that will be exchanging data	<ul style="list-style-type: none">Signed Grant AgreementUpdated WorkplanSigned Hiway Agreements & W-9
2	Initial Participant Directory entries loaded for all trading partners - at least one (1) entry per organization	<ul style="list-style-type: none">Submitted [and accepted] PD xls to Hiway Ops for each trading partner
3	Hiway test transaction success among all trading partners (confirmed by Hiway Operations)	<ul style="list-style-type: none">Executed test transaction using the production solution by each trading partner; confirm to MeHI by Hiway Ops
4	Hiway production transactions exercising the identified use case	<ul style="list-style-type: none">Email to MeHI PO certifying you executed your use case in production



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Hiway Implementation Grants – POs & Grantees



Sean Kennedy

Baystate Health
Berkshire Health System



Kevin Mullen

Community Healthlink, Inc.
Cutchins Programs for Children & Families
EasCare Ambulance Service, LLC
High Point Treatment Ctr
Joseph M. Smith Community Health Center
Overlook Visiting Nursing Association
Pinnacle Health Management, LLP
Senior Link via Caregiver Homes
Trustees of Noble Hospital
Heywood Hospital
MRN Corp/Sippican Healthcare Center
Life Image, Inc.



Keely Benson

Winchester Highland Management, LLC
Salter Healthcare



Joe Kynoch

Central MA Independent
Physician Association
The Dimock Center



Jim Bush

Center for Human Development, Inc
Clinical & Support Options, Inc.
Harbor Medical Assoc
Hebrew Senior Life/Hebrew Rehabilitation Center
Holyoke Health Center
Home Health VNA
MetroWest Accountable Healthcare Organization
Milford Regional Medical Center
Network Health
North Adams Regional Hospital
UMass Memorial Health Care
So Shore Hospital



Outreach

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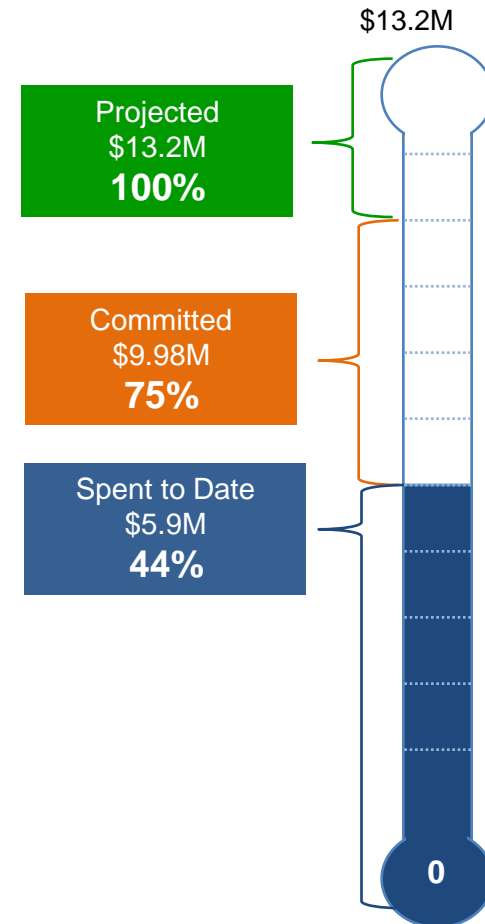
Last Mile | Scorecard Targets

CY2013	Q1	Q2	Q3	Q4	TOTAL
PAs signed	0 / 2	16 / 21	62	75	160
Organizations enabled for connection	0 / 39	12 / 7 *	75	200	321
Vendors enabled for connection	0 / 0	0 / 0	2	10	12
ONC Grant \$ Spent	30% / 35%	46% / 44%	68%	91%	91%

NOTE: Planned / Actual

* Q2 - major push was to conduct the HIway grant solicitations – Implementation & Interface Grants

ONC Grant Spend Down Tracker as of 6/30/2013





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- Coming soon

Item	Description
Community Engagement Program	A program designed to educate providers and consumers on the HIway
Provider Toolkit	A toolkit that arms organizations with basic HIway information so they may directly educate their community
HIway Services Summary	A polished 'white-paper-type' document that provides a broad overview of the HIway – services, connection options, path to connection
HIway Implementation Grant Summary	A refined summary of each grant; intended for healthcare professionals and the press
Path Forward for one Implementation Grantee	Milford Regional Medical Center to share their plans to connect to the HIway



Discussion Item 2:
Mass HIway Implementation Updates –
Baystate Healthcare/Pioneer Valley Information Exchange(PVIX), Beth Israel
Deaconess Medical Center

Baystate Health Pioneer Valley Information Exchange (PVIX)

Heather Nelson, Senior Director Enterprise Clinical
Applications and IT Operations

HIT Council
August 5, 2013

Overview

- ❖ Mission of PVIX
- ❖ PVIX Phase 1 & Timelines
- ❖ PVIX Architecture
- ❖ Patient Consent
- ❖ Update on MeHI Grant
- ❖ PVIX to MA HIway Architecture
- ❖ Challenges
- ❖ Futures

Fast Facts About Baystate Health

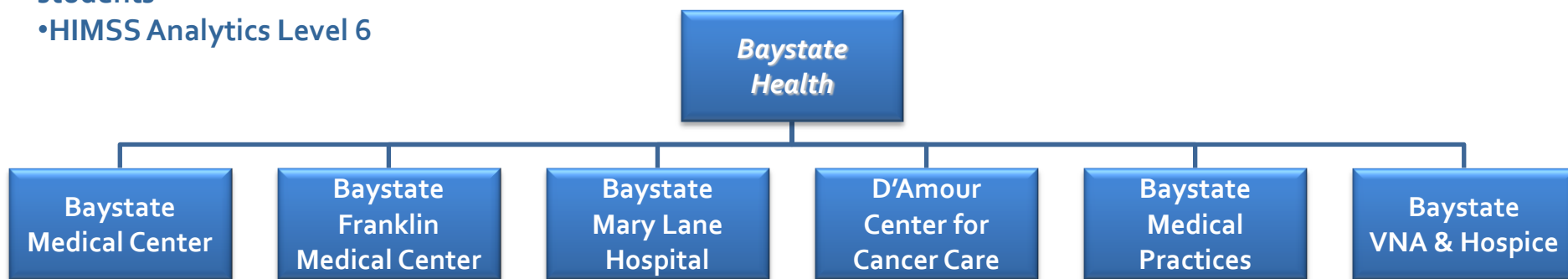
Baystate Health is an integrated health care delivery system serving a population of nearly 1 million people in western Massachusetts. It is one of the largest health systems in New England with over 10,000 employees and an annual budget of over \$1.4 billion. The major facilities and services of Baystate Health include:

At a Glance

- Type of Organization: IDN/ teaching hospital
- FTE's: 10,000+
- Physicians: 1700 (580 employed)
- Academic Program: ~320 residents in 10 ACGME-accredited residencies & 20 fellowships; 250 medical students
- HIMSS Analytics Level 6

Statistics

- \$1.6B revenues
- Inpatient Facilities: 840 beds at 3 sites
- Admissions: 44,000
- Patient Days: 210,000
- Amb Practices: 70 Primary & Specialty Care sites



About Baystate Health



Pioneer Valley Information Exchange (PVIX)

Connecting our Communities of Care

Sharing a common vision about Community:

To provide **Clinicians** access to relevant healthcare information as frictionless as possible to ensure cost-effective, high quality care;

To empower **Patients** with information and tools to enrich their relationship with their clinician and lead healthier lives;

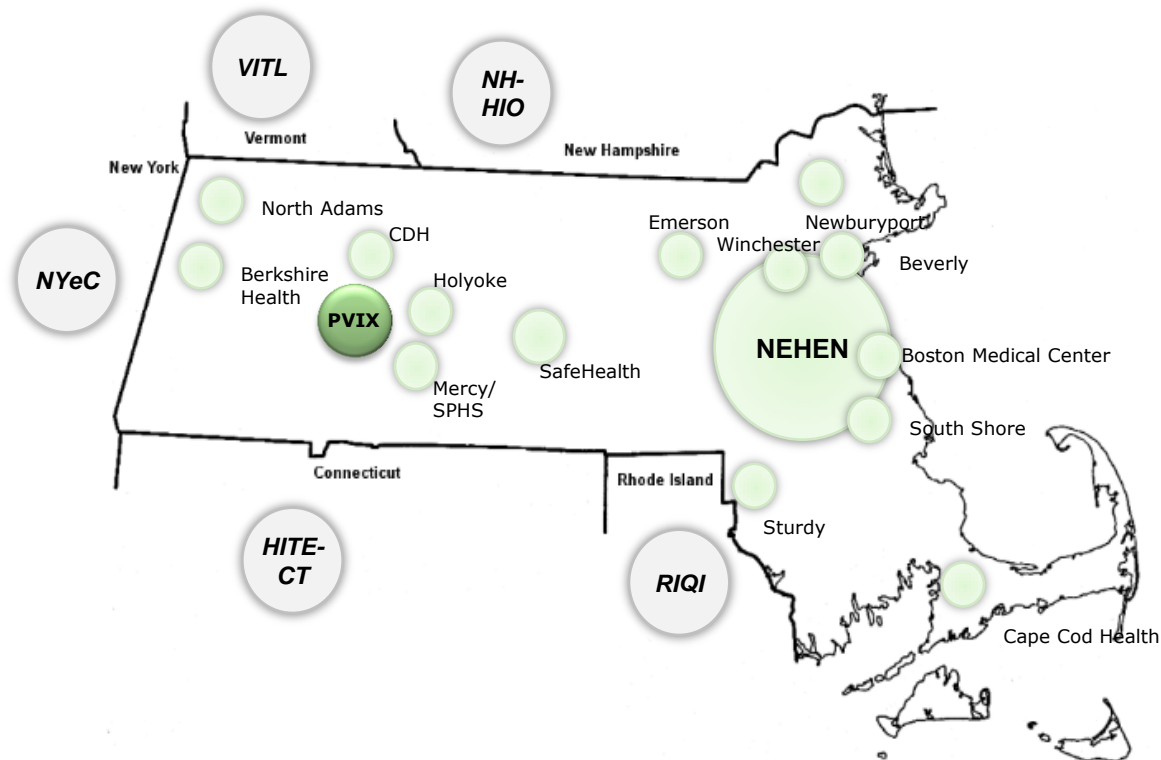
To connect our **Care Communities** in a way that improves population health, the care experience, and cost;

To **Collaborate** so that we do this in a way that is unified, sustainable, and effective.



PVIX As The Connector

- Many private HIEs in Western MA underway
- Community is concerned about too many HIEs for connecting
- PVIX focus is to be Hub among Western MA community Hubs



Initiated by the Community

Community (founding members)



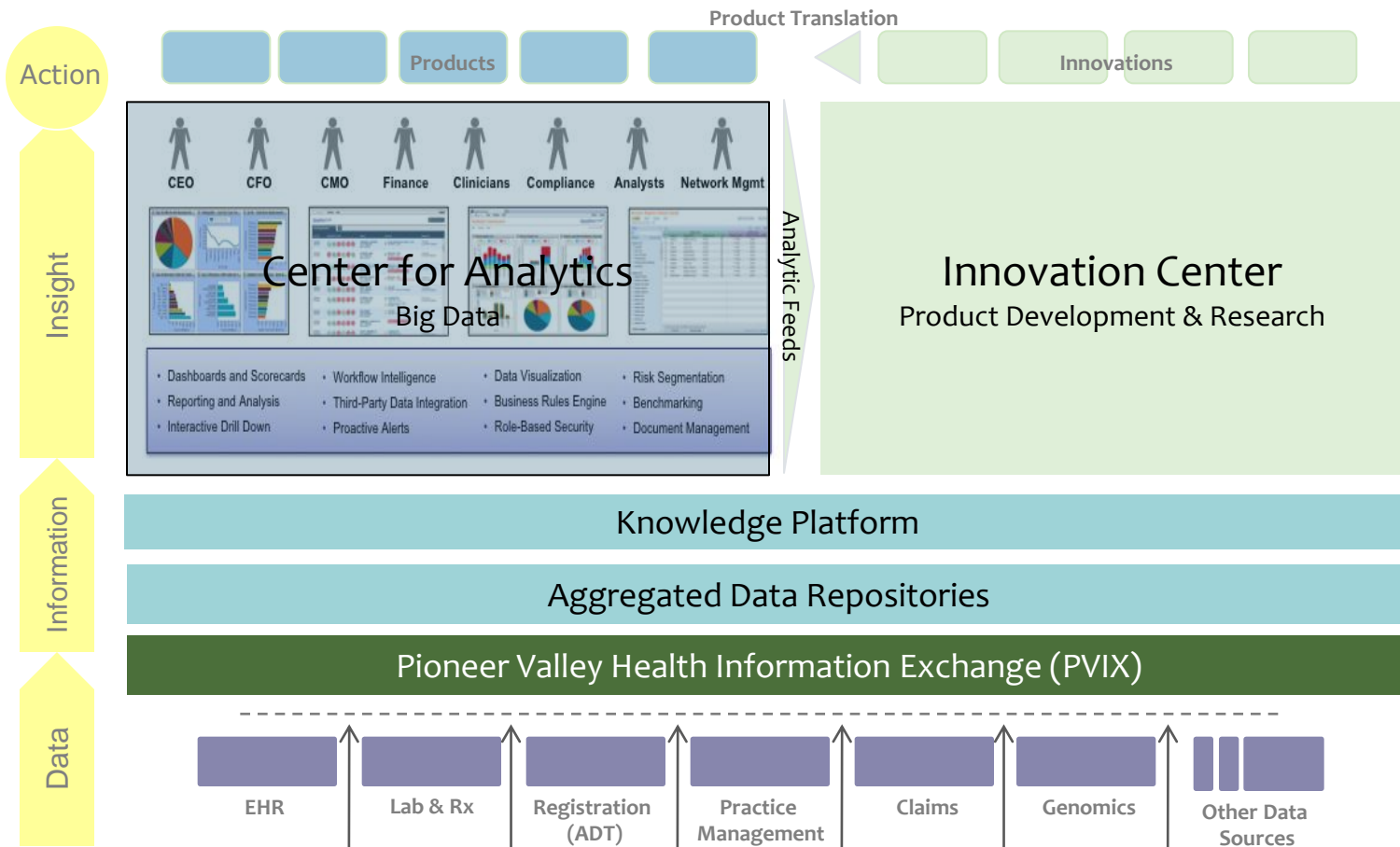
Advisor



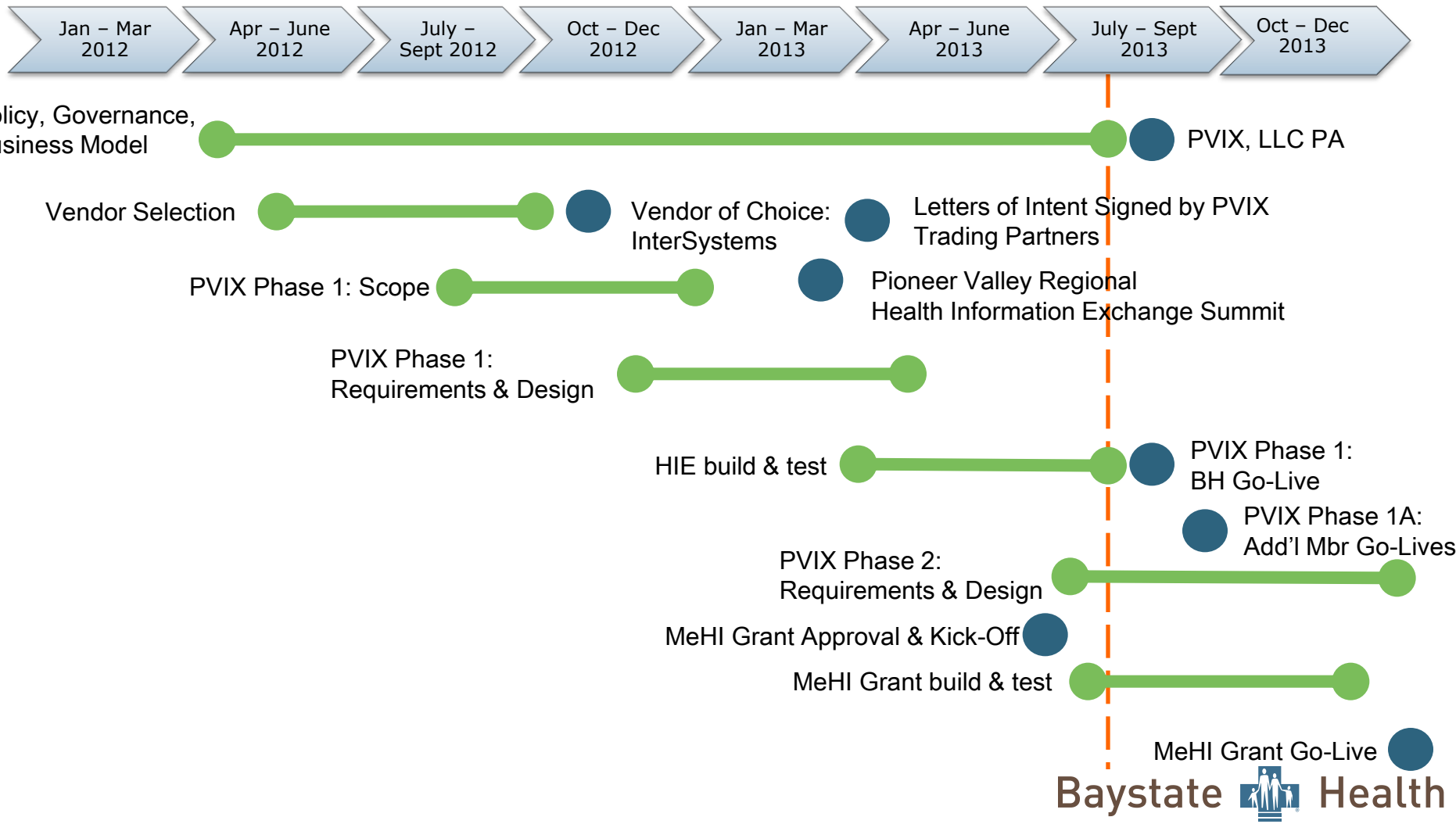
Platform



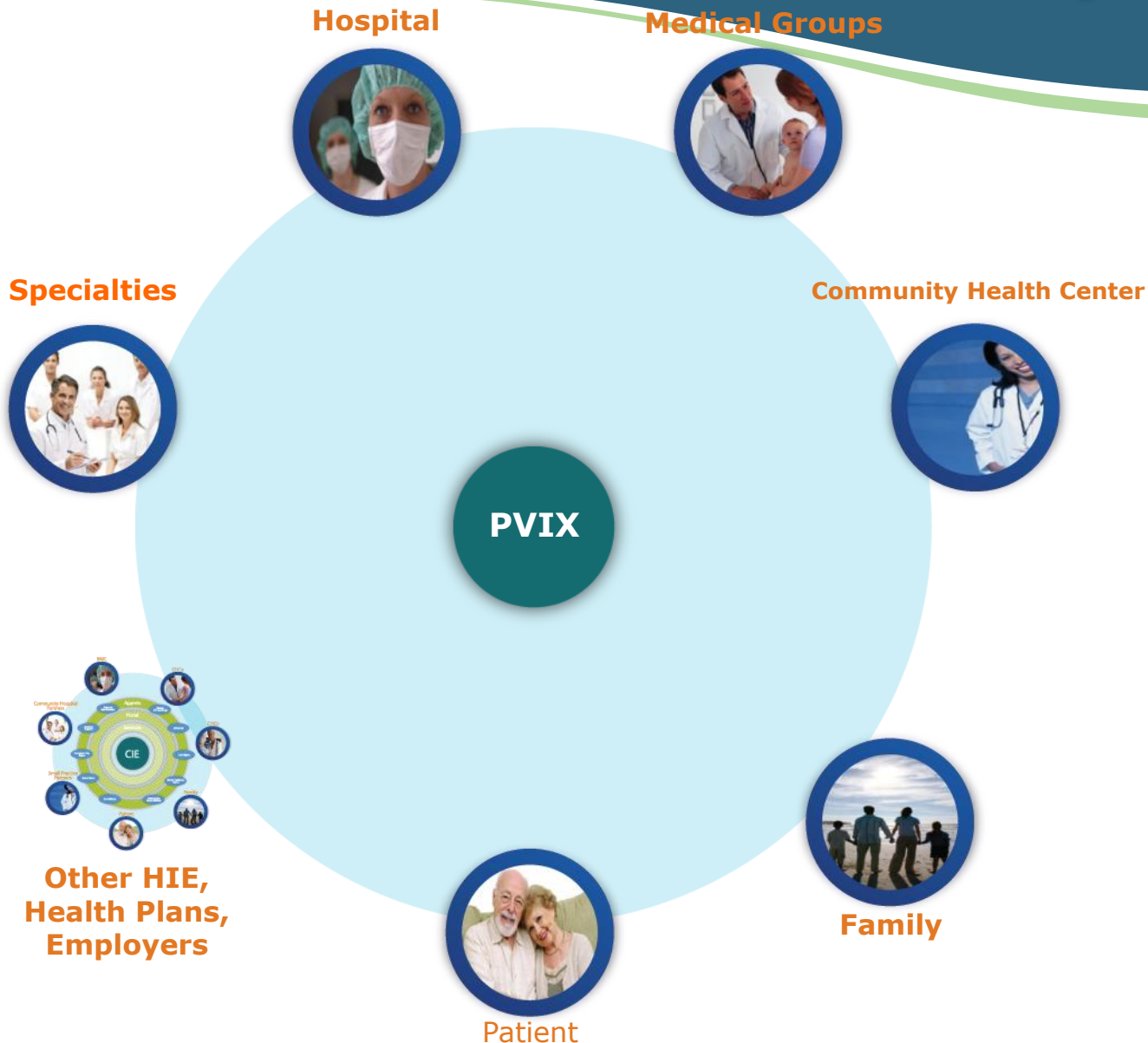
PVIX is the Foundation to a Larger Information Platform Vision



PVIX & MeHI Grant Timelines



Health Information Exchange



Features in Phase 1:

- Master Patient Index
- Patient Demographics and Visit Information
- Discharge/Visit Summaries
- Lab Results
- Continuity of Care Document including Allergies, Problems, Immunizations, Medications and Vital Signs
- Encounter Event notifications – example – PCP notified of ED Admission
- Single Sign on from participant's EMR into PVIX – if supported by EMR vendor
- Provider to Provider Messaging
- Consent Management

PVIX Architecture

HealthShare Viewer

Pioneer Valley Information eXchange

Access Gateway (Portal)

Validates Users to security Module,
Process patient search requests (pix, pdq) to HSPI for patient matching/lists w/locations,
Requests data from Domain Layer using Patient/facility registry, Aggregates CHR data from Domain layer for viewer

Identity Layer

HealthShare Patient index (eMPI)

Stores Composite patient record and PVIX Partner IDs

Clinician Registry

Store PVIX partner physicians and their partner IDs

Registry Layer

Patient Registry – base patient demographics, ID's & CHR data types stored

Facility Registry – Data source provider names and ID's

Assigning Authority Registry – Assigning authorities

ANALYTICS

Business Activity Monitoring (BAM), Business Process Management (BPM),
Outcomes Reporting, Clinical Registries Reporting

Domain Layer

Edge Gateway Servers – One per entity in Cache Database

Receives, normalizes & stores patient CHR data from partners, Serves Data to HealthShare,
Sends data to Access gateway for event notification to provider (message delivery model)

Enterprise Service Bus (ESB)

ENSEMBLE (supports, HL7, XML, FTP, File,
Message / Data Transformation, Mediation Layer, Cache Database, messaging & event-brokering engine

Communications Layer

Supports TCP/IP, FTP, sFTP, HTTP, HTTPS, SOAP, Batch

SECURITY

(User Identity,
Consent,
Roles)

MANAGEMENT

(eMPI mgmt,
Server mgmt,
Registry mgmt,
Portal mgmt
ESB mgmt
Identity mgmt)

Ethernet

VPN

VPN

VPN

VPN

Baystate
Health

Pedi Services of
Springfield

Western New
England Renal
Transplant

Valley Medical
Group

Valley Medical
Associates

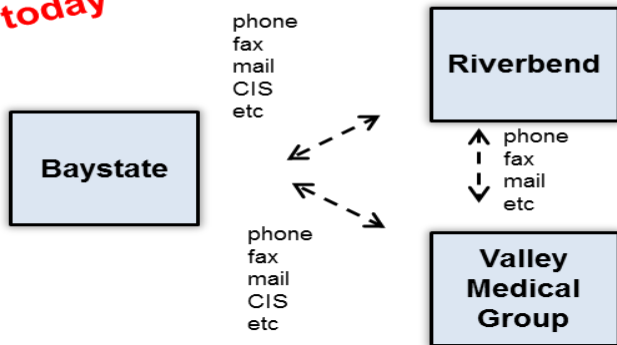
Riverbend

Mercy Hospital

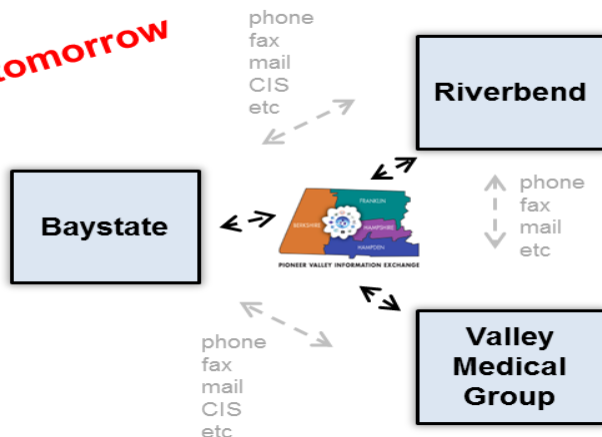
Patient Consent

Comparison of Current and Future Data Exchange Practices

HIE today



HIE tomorrow



What's the same?

- **Based on HIPAA TPO authorization**
 - No consent required for TPO exchanges
 - Patient acknowledgement required (NPP)
- **Special protections for statutorily protected information**
 - HIV and genetic test results (State law)
 - Substance abuse treatment (Federal law)
- **Aligned with Phase 1 MA Hlway opt-in requirements**
 - Variation allowed in opt-in approaches
 - Covered by existing Participant-level written General Consents and updated NPPs

What's different?

- **Data access controls:**
 - Current: no technology controls, only policy controls (except CIS which has policy/technology access controls; manual request and response; historical data available ad hoc)
 - PVIX: allows only TPO exchanges; enforced by policy and technology controls that limit what users can access and monitor what they have accessed; historical data available to all authorized TPO participants
- **Treatment relationships determined by:**
 - Current: ad hoc – provider-determined based on referrals/consults and patient-provided info
 - PVIX: determined by electronic matching of patient registrations/records and entities

PVIX HIPAA-Based Access Controls

PVIX Policy Controls (sample)

- Uniform and transparent authentication, authorization, and access requirement for all participants
- Participation Agreement contractual requirements to adhere to HIPAA policies and rules
- Mandatory user training and sanctions for non-compliance
- Access based on validated treatment relationships between patients and Participant Organizations
- User-level access controls with three levels of authorization: Clinical Access, Administrative Staff Access, and Technical Staff Access
- Regular audits of access; hard audits triggered by “temporary access”
- Participants restricted from sending statutorily-protected information to PVIX
- Record review for protected data at onboarding

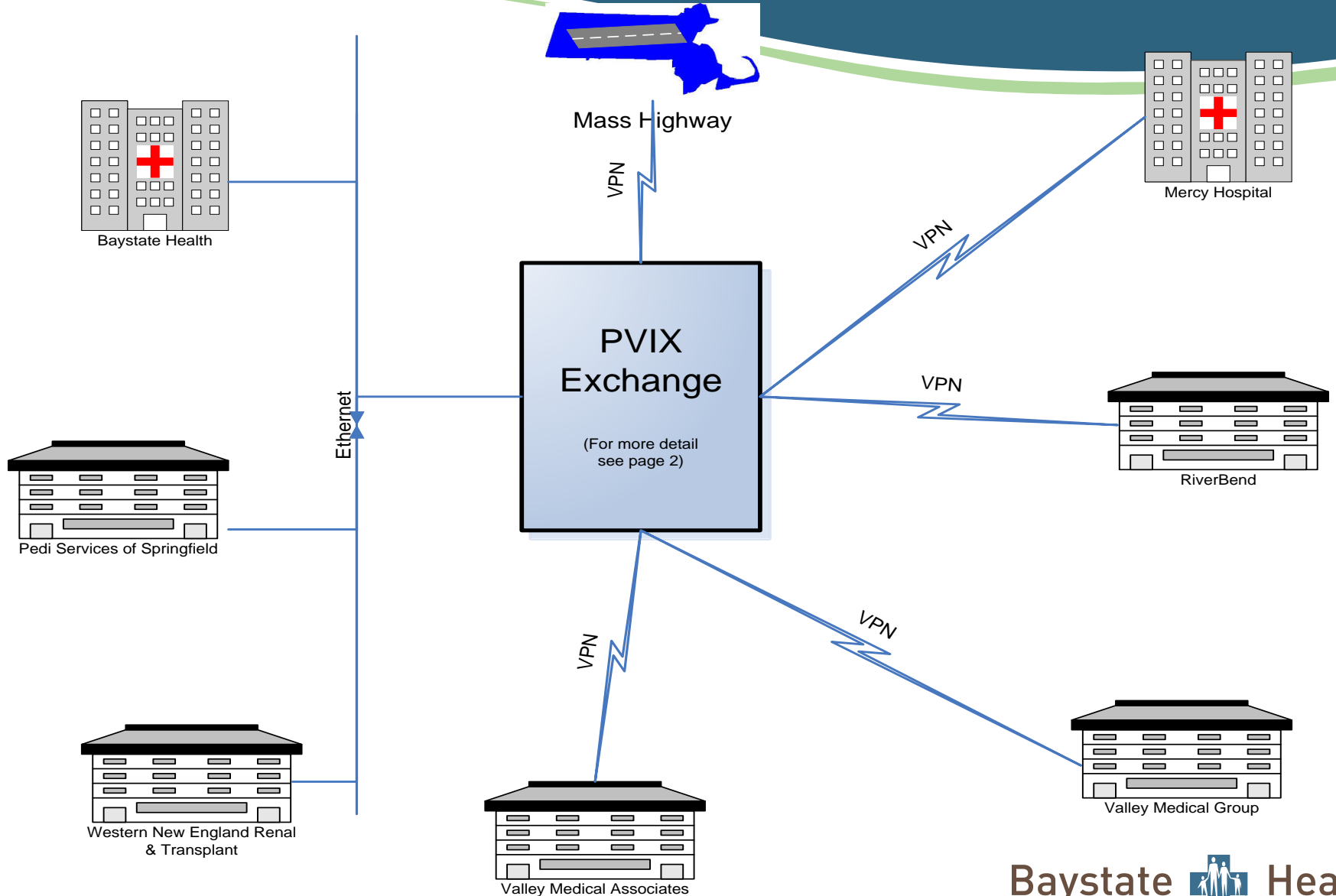
PVIX Technology Controls (sample)

- Uniform and transparent authentication, authorization, and access controls across all participants
- TPO access controls. Participant Organizations will only be allowed access to the records of patients with whom they have a validated treatment relationship, defined as a patient record or appointment record that is recorded in the PVIX system
- Role based access controls. Participant Organization will determine which individuals within their organizations will be authorized to access PVIX, and will establish and maintain authorization levels for each such individual according to the following categories:
 - Clinical Access
 - Administrative Staff Access
 - Technical Staff Access
- Patient Directory access controls. Restricted search parameters to prevent incidental disclosures, such as: searches based on multiple fields of information (eg, first name, last name, address, DOB, etc), access allowed only for “direct hit” matches, no batch searches, no “wildcard” searches, etc
- Filtering of statutorily protected information (as needed)

Update on MeHI Grant

- ❖ Kick-off in early-July with MeHI team
 - Aim #1 – Transition of Care Alert
 - Aim #2 – Collaboration & Information Exchange
 - Aim #3 – Care Plan Dissemination
 - Aim #4 – Medication Adherence
- ❖ Preliminary architecture reviewed and design is underway
 - Project team forming (internal and external resources)
 - Bi-weekly meetings scheduled
- ❖ Milestone #1 met:
 - Project Plan drafted and sent to MeHI team
 - Participant Agreements signed and returned to MeHI team

PVIX to MA HIway Architecture



PVIX Relationship with HIway

- ❖ PVIX will sign the Technical Integration Vendor agreement on behalf of its members
- ❖ “Chain of trust” extension – PVIX members will sign the PVIX PA which will also include the MA HIway PA as an addendum
- ❖ PVIX accepts HIway certificate
- ❖ PVIX customers loaded in HIway directory
<name/identifier>.<OrgName>@direct.pvix.masshiway.net

Challenges We've Faced

- ❖ On-boarding trading partners
 - PVIX is ready....the EMR vendors may not be
- ❖ EMR vendor “readiness” with information exchange features & functions
 - Continuity of Care Documents
- ❖ Legal Tasks
 - Participant Agreement
- ❖ Identifying the “future state” and value-added services
- ❖ Operational Sustainability – Phase 2 challenge

Futures

Phase 2: Value Added Services

- ❖ Sustainability through membership subscription
- ❖ Patient Engagement Platform
 - BH Patient & Employee Portal to support Meaningful Use State 2 and beyond
 - Community Portal for Western MA
- ❖ Health Plans as PVIX Trading Partners
- ❖ Analytics to support:
 - Population Health
 - Integrated Case Management
 - Research
- ❖ Mobile Solutions

Thank You.

Questions?



Beth Israel Deaconess
Medical Center



HARVARD MEDICAL SCHOOL
TEACHING HOSPITAL

Beth Israel Deaconess Medical Center Mass Hlway Progress Report



BIDMC Mass Hlway Progress Report

Exchanging Data over the Hlway with:

- MAeHC
- MDPH – Immunizations
- MDPH – Lab reporting
- Network Health – C32's and Lab HL7

Testing Hlway Data Exchange with:

- MDPH – Syndromic
- BPHC – Labs
- BPHC – Syndromic
- Partners – Joint patient management initiative
- Atrius – They need to setup an automated conversion from CCD to EPIC transcription



Discussion Item 3: Advisory Group Discussion & Updates



Advisory Group Update



3 of the Advisory Groups met in July and revisited the phase 2 draft design in more detail

- **The Provider AG gave input on the following:**
 - Responsibilities of data holders and data requestors
 - Communicating with patients regarding consent for Phase 2 services (RLS publish, RLS view, medical record request)
 - Implied consent in Emergency Department use cases
- **The Legal & Policy AG and the Consumer AG gave input on the following:**
 - Policy and technical controls being put into place to support Phase 2 services (RLS publish, RLS view, medical record request)



The Consumer Advisory Group raised the following concerns for HIT Council discussion and consideration:

- **Consumer representation on HIT Council:** Assumed to be an oversight in MA Chapter 224, there is no formal consumer representative on the HIT Council. The Consumer Advisory Group requests a short term solution and a change to the law
- **Public education plan for informing and educating the public about the Mass HIway:** As Phase 2 service planning is now well underway, the Advisory Group recommends development of a formal Mass HIway communications plan as well as clear accountability for its execution. Several Advisory Group members are eager to assist in being conduits to various parts of the patient population, especially the under-served and under-represented.



Discussion Item 4:
Mass HIway Update –
Implementation & Support Update, Phase 2 Update



Live (successful transactions sent) and In Production or Moving to Production:

<ol style="list-style-type: none">1. Beth Israel Deaconess (BIDMC)2. MAeHC3. Network Health4. Tufts Medical Center5. Boston Public Health Commission6. Beaumont Rehab and Skilled Nursing7. Brockton Neighborhood Health8. Pediatric Care Associates9. Jessica Foley, LMHC10. Greg Harris11. Notre Dame Long Term Care12. Millbury Health Care Center	<p>13. Holyoke HM Connect HIE</p> <ul style="list-style-type: none">• Holyoke Medical Center• Western Massachusetts Physicians Associates (29 providers)• Holyoke Medical Center Specialties (12 providers)• 7 Individual, independent practices
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Outreach

Sales

Implementation

Support



“On the Bubble” – Successfully sent test transactions:

- 1. Children’s Hospital**
- 2. Partners**
- 3. Vanguard/Metrowest Medical Center**
- 4. Pediatric Care Associates**

Major Clients slated for August/September Testing:

- 1. MEDITECH**
- 2. PVIX/Baystate**
- 3. Atrius, Reliant and VNA Care Network – 400+ providers loaded**



Outreach

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- Transactions exchanged for July 2013 – **93,132**
- Cumulative transactions to date – **1,349,083**
- Testing between MEDITECH platforms and HIway is in process
 - Will move to test directly with MEDITECH clients that have upgraded to compliant platforms
- Significant effort to work through HISP connections
 - Successfully worked through Holyoke HIE connection
 - Working through PVIX agreement
 - Ongoing discussions: Epic, eCW, eLINC, Surescripts and Athena



Phase 2 overall timeline



Mass Hlway Phase 2 high level project schedule

Activity	Target date
CMS approval of Phase 2 IAPD	Completed
Phase 2 contract (or change order) executed	Completed
Go-live - Public Health - Immunization Registry Node	Completed
Go-live - Public Health - Reportable Lab Results (ELR) Node	Completed
Testing - Public Health - Syndromic Surveillance Node	Completed
Testing - EOHHS – Children’s Behavioral Health (CBHI) Node	Completed
Phase 2 Requirements Gathering & Validation	July 26, 2013 Completed
Phase 2 Design Approach Decision	August 2, 2013 Completed
Go-live - Opioid Treatment Program (OTP) Node	Sept 2013
Go-live for Phase 2, Release 1 (Other Public Health interfaces)	Nov – Feb 2014
Go-live for Phase 2, Release 2 (EMPI, RLS, Consent, Provider Portal, Consumer Portal)	Oct 2013 – Mar 2014



Discussion Item 4:

Wrap up and next steps



HIT Council meeting schedule



HIT Council 2013 Meeting Schedule*:

- January 14 – 11th Floor Matta Conference Room
- February 4 – 11th Floor Matta Conference Room
- March 13 – 11th Floor Matta Conference Room
- April 8 – 21st Floor Conference Room
- May 6 – 21st Floor Conference Room
- June 3 – 21st Floor Conference Room
- July 1 – 21st Floor Conference Room
- August 5 – 21st Floor Conference Room
- **September 9 – TBD**
- October 7
- November 11
- December 9

**All meetings to be held from 3:30-5:00 pm at One Ashburton Place, 21st Floor, Boston, unless otherwise noted*



Wrap up



Next HIT Council Meeting: September 9, 2013

Preliminary Agenda:

- Customer Implementation Updates
- Advisory Group Update/Discussion
 - Discussion Topics?
- Mass Hlway Update